

INTRODUCTION

PIR-2036 series consists a group of mini size ceiling mount passive infrared motion sensors; which are designed for the applications in intrusion alarm and energy-saving systems. They give an 6-8 meters diameter conical detection pattern on the ceiling height of 2.5 to 3.0 meters.

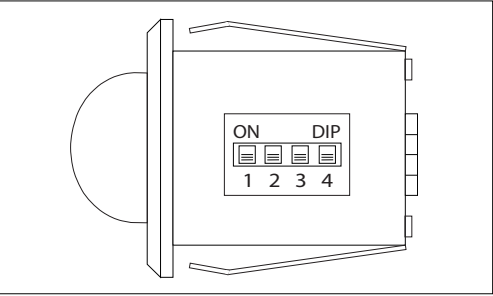
The alternate polarity signal processor inside the motion sensor provides high rejection of the noises due to radio interference and power surges. It also provides the function of input signal pulse counting, walk-test timing, power-up delay, alarm output timing, and controls, etc.

Four versions of PIR-2036 are available; which employ a dry relay contact that is selectable for N.C. or N.O. output for universal applications. They are compatible with the intrusion alarm and energy-saving systems on the market. The sensors are offered with suffix letters of AP, AM, EP, and EM for their application differences.

- PIR-2036AP -- For Alarm System, with Popular (23mm) Lens
- PIR-2036AM -- For Alarm System, with Mini (17.3mm) Lens
- PIR-2036EP -- For Energy-Saving System, with Popular (23mm) Lens
- PIR-2036EM -- For Energy-Saving System, with Mini (17.3mm) Lens

FEATURE SETTING DIP SWITCH

The 4 switches 1, 2, 3, and 4 are set in their Exit Factory positions. Use a small screwdriver to move the switch(es) to the desired position for your applications if required.



DIP Switch 1 – Single/Double Pulse Count Selection:

- Position (1) - Single alternate polarity pulse count for General environment
- Position ON - Double alternate polarity pulse count for Harsh environment

FEATURES

- Low Noise, High Stability Quad-Element Pyro-Sensor
- 6 - 14 μ M Human Spectral Response
- Single or Dual Alternate Polarity Signal Processing
- DIP Switch for Feature Settings
- Pulse Count for Normal and Harsh Environment
- Power-up Delay Ensures Normal Operation with The Associated System
- Walk-Test Indication is Selectable for Continuous, OFF, or OFF after the 30-Minute Walk-Test.
- Output Relay Selectable for N.C. or N.O. Dry Contact for Universal Compatibility
- Four Connection Terminals of (+) (-) & Relay Dry Contact for External Connection
- Mounts on Ceiling without Screws

DIP Switch 2 – Motion Detection LED Indicator:

- Position (2) - LED Indication OFF Mode Selection: Provide the LED OFF Mode according to the setting on DIP Switch 4. See the DIP Switch 4 setting for the details.

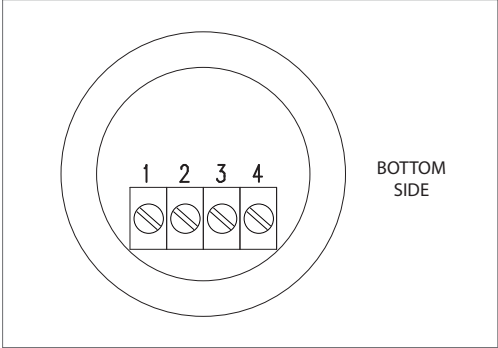
- Position ON - Continuous Indication: The LED flashes for 2 Minutes continuously during the “Power-up delay”, then provides the “Walk-test” Indication all the time when motion is detected. This feature is preferred for the Alarm System to let the owner knows the motion detector is working normally.

DIP Switch 3 – Relay Output Dry Contact N.C. / N.O. Selection:

- Position (3) - Output relay contact is Normally Open (N.O.). The output relay is normally de-energized. Preferred for Energy-Saving systems.

- Position ON - Output relay contact is Normally Closed (N.C.). The output relay is normally energized. Preferred for Alarm systems.

CONNECTION TERMINALS



- Terminal 1 (-) Common ground of the device
- Terminal 2 (+) 12VDC input. Connect it to a 9–15VDC power source
- Terminals 3 & 4 N.C. or N.O. sensor output dry contact (See DIP switch 3 setting)

DIP Switch 4 – LED OFF Mode Selection:

DIP Switch 4 provides Two Functions for selection while DIP Switch 2 is in “Position (2)”. The setting of the LED OFF Does Not affect motion detection output.

- Position (4) – The LED Indication is Completely OFF:
 - a) The LED is OFF after the 2 Minutes “Power-up Delay” indication.
 - b) LED indication OFF is preferred for most Energy-Saving Systems to prevent guests aware of their motion is detected.

Position (ON) – LED Indication for Walk-test 30 Minutes after Power-up Delay:

- a) The LED flashes for 2 Minutes during the “Power-up Delay”, then goes to the “Walk-test” mode for 30 Minutes for the installer to perform Walk-test; after that, the LED is completely OFF automatically.
- b) This feature is preferred by some installers not required to un-install the sensor from the ceiling to set LED to OFF mode after the Walk-test.
- c) The timing cycle repeats in the following cases:
 - (i) Power resumes after a power interruption, or
 - (ii) Manually slide DIP Switch 4 to the position (4) and back to ON again.

LED Indicator in DIP Switches 2 + 4 Setting Combinations

FUNCTIONS	DIP SWITCH 2	DIP SWITCH 4
A) LED Continuous Indication	Position ON	Position (4) or ON
B) LED Completely OFF	Position (2)	Position (4)
C) LED 30 Minutes Indication, Then OFF	Position (2)	Position ON

INSTALLATION

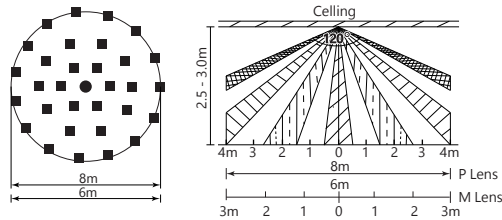
A) Mounting Location

- Mount the motion sensor on a stable ceiling.
- The areas do not have openings constantly exposed to the outside environment.
- The location is expected an intruder will cross the beam of the detection pattern.
- Do not locate sensors where hot or cold moving air blows directly onto the unit.
- Avoid aiming the sensor toward heating or air conditioning vents or ducts, exterior metal walls, exterior windows or curtains covering windows, refrigerator or freezer grills, or other surfaces that may change temperture rapidly.
- Prevent putting large objects in front of the sensor which will cause significant changes in the area or volume protected.
- Drill a mounting hole on the ceiling with cut-out dimension **32mm** in diameter.

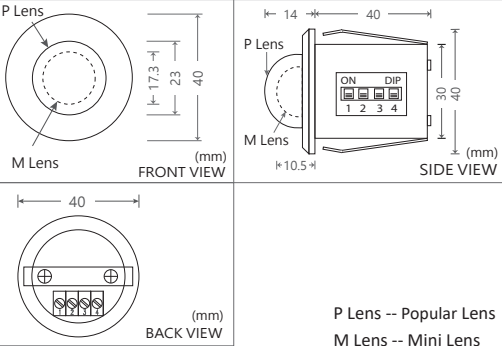
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DETECTION PATTERN

PIR-2036AP & PIR-2036EP -- Conical Pattern Diameter = 8.0m
PIR-2036AM & PIR-2036EM -- Conical Pattern Diameter = 6.0m



DIMENSIONS



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P Lens -- Popular Lens
M Lens -- Mini Lens

B) Settings and Wiring

- It is not required to open the case for all the settings and wirings. They can be done externally.
- Set up your required features on the **DIP switch**. Use a small screwdriver to move the switch(es) for the selections carefully from its position to ON or vice versa.
- Get the wires running through the mounting hole for the sensor connection.
- Connect the (+) and (-) wires to a 12VDC power supply of your system.
- Connect the pair of relay output wires to link-up the sensor with your system.
- Insert the sensor unit into the mounting hole carefully.

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SPECIFICATION

- Operation Voltage : 8-16VDC, 12VDC Nominal
- Current Consumption : 15mA Typical at 12VDC
- Power-up Delay : 2 Minutes with LED Flash Indication
- Detection Media : Quad-Element Pyro-Sensor
- Detection Spectral : 6 – 14 μ M
- Detection Range : 6/8M at 25°C
- Signal Processing : Alternate Polarity Signal Processing
- Pulse Counting : Single or Dual Polarity for Harsh Environment, Selectable
- Sensor Output Time : 3 Seconds
- Sensor Output Contact : N.C. or N.O. Relay Dry Contact, Selectable
Contact in series with a 10 Ohm current limiting resistor
- Output Contact Rating : 50VDC/0.5A Maximum
- Walk-test LED Indication : Starts after Power-up Delay
- Relative Humidity : 95% Non-condensing
- Operation Temperature : -10°C to 55°C
- EMC : Conforms to CE-Mark Standard
- Weight : 30 gm net

Specifications are subject to change for modifications without notice.

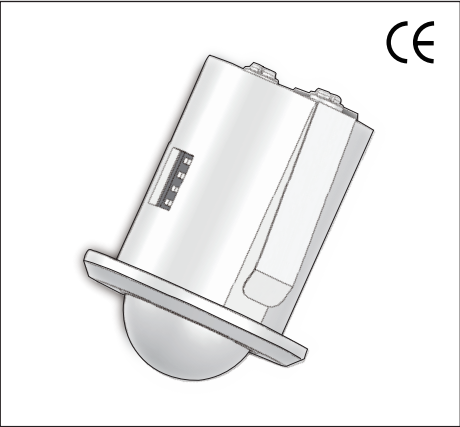


WALK TEST

- The LED flashes for 2 minutes after power-up, after that the sensor is in normal operation, a walk-test with indication can be performed.
- Walk-test indication is available as long as you like while DIP Switch (2) is in **ON** mode.
OR
30 Minutes after the Power-up Delay. See Page 6, DIP Switch 4 for the setting details on Position (ON).
- Test the sensor over the entire protected area to verify the proper operation of the unit.
- Walk into the protected area at a rate of 1 step/second across the protection beams and observe the LED indicator.
- In Single Alternate Polarity Signal Counting with the DIP Switch (1) in its Position (1), alarm output indication (LED) is given when the sensor is tripped.
- In the Harsh condition, Dual Alternate Polarity Pulse Counting with the DIP Switch (1) in **ON** mode, the sensor requires more steps to trip twice within 10 seconds to give alarm indication.

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PIR-2036
CEILING MOUNT MINI
PIR MOTION SENSOR



OPERATING INSTRUCTIONS

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